

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:) Attorney Docket No. 1248-38
)
) Before the Examiner
 Perryman et al.)
)
 Serial No. Unknown)
)
 Filed: November 27, 2001) Group Art Unit
)
) November 27, 2001
)
 GOLF CLUB SHAFT WITH)
 CONTROLLABLE FEEL AND BALANCE)
 USING COMBINATION OF)
 FIBER-REINFORCED PLASTICS AND)
 METAL-COATED FIBER-REINFORCED)
 PLASTICS)

I hereby certify that this paper is being deposited with the United States Postal Service as **Express Mail** in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on November 27, 2001

Charles J. Meyer

Name of Registered Representative

Charles J. Meyer

Signature

November 27, 2001

Date of Signature

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks
 BOX PATENT APPLICATION – NO FEE
 Washington, D.C. 20231

Sir:

Please consider the following Preliminary Amendment with the continuation application filed herewith.

In the Specification

Please amend the paragraph on page 1, lines 4-5 as follows:

“This application is a continuation of patent application serial number 09/337,356 filed June 21, 1999, now U.S. Patent No. _____ which claims priority to provisional application serial number 60/090,743 filed June 24, 1998 and provisional application serial number 60/118,886 filed February 5, 1999.”

A clean copy of the paragraph is:

“This application is a continuation of patent application serial number 09/337,356 filed June 21, 1999, now U.S. Patent No. _____ which claims priority to provisional application serial number 60/090,743 filed June 24, 1998 and provisional application serial number 60/118,886 filed February 5, 1999.”

1248-29:EST:ES4660

Application Serial No. 09/337,356 has been allowed, but has not yet issued. Applicant will submit the U.S. Patent Number once it becomes available.

In the Claims

Please cancel claims 1-27. Please add claims 28 - 52 as follows.

28. A method of manufacturing a composite golf club shaft, comprising the steps of:

- a) filament winding or sheet rolling a plurality of fiber reinforced graphite plies around a mandrel to form a shaft core;
- b) filament winding at least one outer ply having metal-coated fibers around said core, wherein said metal-coated fibers are coated with a metal chosen from the group consisting of: nickel, titanium, platinum, zinc, copper, brass, tungsten, cobalt, gold and silver; and,
- c) placing a scrim layer around said at least one outer ply.

29. The method of claim 28 wherein said at least one filament wound ply with metal-coated fibers is wound to uniformly add an amount of weight to said shaft.

30. The method of claim 28 wherein said at least one outer ply having metal-coated fibers is uniformly filament wound over a portion of said shaft to concentrate an amount of weight in a location on said shaft.

31. The method of claim 30 wherein said shaft has length and a hosel portion and wherein said outer ply having metal-coated fibers is uniformly filament wound around said hosel portion for a distance approximately one third or less of the shaft's length.

32. The method of claim 30 wherein said shaft has length and a grip portion and wherein said outer ply having metal-coated fibers is uniformly filament wound around said grip portion for a distance approximately one third or less of the shaft's length.

33. A composite golf club shaft, comprising:

- a) a core formed on a mandrel of one or more filament wound or sheet-rolled fiber reinforced plies to form a shaft with a length and a hosel portion;
- b) an outer layer formed around said core including at least one filament wound ply having nickel-coated fibers;
- c) wherein said at least one filament wound ply with nickel-coated fibers is uniformly wound around said hosel end portion for a distance approximately one third or less of the shaft's length to uniformly add an amount of weight to said shaft; and,
- d) a scrim layer placed around said outer layer.

34. A composite golf club shaft, comprising:

- a) a core formed on a mandrel of one or more filament wound or sheet-rolled fiber reinforced plies;
- b) an outer layer formed around said core including at least one filament wound ply having metal-coated fibers;

- c) wherein said at least one filament wound ply with metal-coated fibers is wound to uniformly add an amount of weight to said shaft, wherein said metal is chosen from the group consisting of: nickel, titanium, platinum, zinc, copper, brass, tungsten, cobalt, gold and silver; and,
- d) a scrim layer placed around said outer layer.

35. The composite golf club shaft of claim 34 wherein said core is formed of non-metal-coated fiber plies.

36. The golf club shaft of claim 34 wherein at least one ply in said core includes metal coated fibers.

37. The composite golf club shaft of claim 34 wherein said at least one metal-coated filament wound ply in said outer layer has a metal content between about ten percent and about sixty percent by weight.

38. The composite golf club shaft of claim 37 wherein said at least one metal-coated filament wound ply in said outer layer has a metal content between about twenty percent and about twenty-six percent by weight.

39. The composite golf club shaft of claim 34 wherein said at least one metal-coated filament wound ply in said outer layer is wound at an angle between about five degrees and about twenty-five degrees from the longitudinal axis of the body.

40. The golf club shaft of claim 34 wherein said at least one metal-coated filament wound ply in said outer layer is wound in a diamond pattern.

41. The golf club shaft of claim 34 wherein said metal is nickel.

42. The golf club shaft of claim 34 wherein said metal is copper.

43. The golf club shaft of claim 34 wherein said at least one metal-coated filament wound ply in said outer layer is uniformly wound over a portion of said shaft to concentrate an amount of weight in a location on said shaft.

44. The golf club shaft of claim 43 wherein said shaft has a length and a hosel portion and wherein said amount of weight is concentrated in the hosel portion of said shaft.

45. The golf club shaft of claim 44 wherein said metal-coated filament is uniformly wound around said hosel end portion for a distance approximately one third or less of the shaft's length.

46. The golf club shaft of claim 43 wherein said shaft has a length and a grip portion and wherein said amount of weight is concentrated in the grip portion of said shaft.

47. The golf club shaft of claim 44 wherein said metal-coated filament is uniformly wound around said grip portion for a distance approximately one third or less of the shaft's length.

48. A composite golf club shaft, comprising:

- a) a core having a length formed on a mandrel of one or more filament wound or sheet-rolled fiber reinforced plies;
- b) an outer layer including at least one sheet rolled ply having metal-coated fibers formed around a portion of said core for a distance approximately one third or less of the core's length;
- c) wherein said at least one sheet rolled ply with metal-coated fibers is wound to uniformly add an amount of weight to said shaft, wherein said metal is chosen from the group consisting of: nickel, titanium, platinum, zinc, copper, brass, tungsten, cobalt, gold and silver; and,
- d) a scrim layer placed around said outer layer.

49. The shaft of claim 48 wherein said core has a hosel portion and said at least one sheet rolled ply having metal-coated fibers is wound around said hosel portion.

50. The shaft of claim 48 wherein said core has a grip portion and said at least one sheet rolled ply having metal-coated fibers is wound around said grip portion.

51. The shaft of claim 48 wherein said core has a middle portion and said at least one sheet rolled ply having metal-coated fibers is wound around said middle portion.

52. The shaft of claim 48 further comprising at least a second sheet rolled ply having metal-coated fibers formed around a second portion of said core separated along the length of said core from said at least one sheet rolled ply having metal-coated fibers.

REMARKS

A final office action on Applicant's parent application issued on August 8, 2001. While the present claims differ from the claims in the parent application, Applicant would like to address a few of the Examiner's remarks. For example, Applicant submits that the office action did not accord sufficient weight to the Declaration of Michael W. Perryman, and that the Examiner incorrectly cited several references.

As discussed in Mr. Perryman's Declaration, Applicant respectfully submits that the commercial embodiment of the present invention has achieved significant commercial success specifically due to the claimed features. As mentioned in the declaration, product sales of the present invention have grown at a rate of 20% per year despite a limited marketing budget and a flat to negative growth rate in the shaft market. (Declaration ¶9) By eliminating other potential reasons, the declaration provides evidence that the commercial success of the invention was directly fueled by the benefits of the claimed invention. Moreover, Applicant's products embodying the invention have gained significant industry publicity and recognition for solving a long-felt need. (Declaration ¶¶ 7, 8, 10 and 11) These facts are evidence that the present invention was not obvious to those of skill in the art.

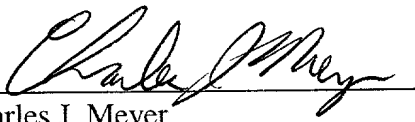
As further discussed in the Declaration, the Examiner's citation to the Suzue patent, (U.S. Patent No. No. 6,088,947) is inappropriate. The Examiner cites the Suzue patent for the proposition that the claimed group of metals is known in the art. While at a general level the Suzue patent discusses golf clubs, it does not deal with the construction of filament or sheet wound composite shafts. Instead, Suzue teaches shrink-wrapping a decorative metal layer around the outside of a shaft. (Declaration ¶14) While the Suzue patent literally lists the claimed metals, there is no teaching or suggestion that the listed metals would function or operate with filament winding or sheet wrapping technology.

Merely because a group of metals is listed in one technology does not make it obvious that the same group of metals would work in other technologies. The shrink-wrapping of Suzue for a decorative layer is functionally and technologically distinct, and is simply not applicable to the filament winding and sheet wrapping of the present invention. Without some teaching that the Suzue reference is applicable, the Examiner's arguments cannot overcome the weight of the evidence in the Perryman Declaration.

In a separate example, the Examiner's arguments regarding Hoffmeyer overlook the language of the claims. The Examiner cites Hoffmeyer for the proposition that, "Hoffmeyer teaches use of *non-uniformly* concentrating windings of predetermined weight in a predetermined location 4." (emphasis added) However, the language of the claims expressly requires that the windings be *uniform*. Moreover, Hoffmeyer teaches the use of "bulge sections" on a shaft. Hoffmeyer does not teach or suggest a smooth area of concentrated weight which is an advantage of the claimed invention. (Declaration ¶ 16)

Applicant respectfully submits that pending claims are allowable and respectfully requests their approval. The Examiner is invited to contact the undersigned directly if it would be helpful to the advancement of this case.

Respectfully submitted,

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